

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A washing machine, comprising:
 - a cabinet;
 - a tub ~~suspended~~ provided in the cabinet;
 - a drum rotatably provided in the tub;
 - a motor provided in the cabinet and configured to rotate the drum;
 - a sensor assembly provided in the cabinet and configured to sense a transient vibration of the tub; and
 - ~~a control unit controlling~~ a controller that controls the motor, ~~the control unit stopping the motor if the tub is in the transient vibration and stops the motor when the tub experiences a transient vibration, wherein the sensor assembly comprises:~~
 - a bracket coupled to an interior of the cabinet;
 - an arm rotatably coupled to the bracket, wherein one end of the arm is positioned
 - a predetermined distance from the tub such that the arm is contacted by the tub and rotates
 - when the tub experiences a transient vibration; and
 - a sensor mounted on the arm, wherein the sensor senses the transient
 - vibration of the tub and outputs a corresponding signal to the controller when the arm

rotates.

2. (Canceled)

3. (Currently Amended) The washing machine as claimed in claim 21, the bracket comprising:

a first support member having a first lateral side positioned adjacent to a wall of the cabinet;

a second support member extending outward from a second lateral side of the first support member;

a first hole provided at a lateral side wherein the first support member and configured to receive a coupling member penetrating into that penetrates the cabinet is inserted in and that extends into the first hole; and

a second hole provided at one end to have the arm hinge-coupled thereto in the second support member and that receives a corresponding portion of the arm so as to hinge-couple the arm to the bracket.

4. (Currently Amended) The washing machine as claimed in claim 3, the bracket further comprising a first hook protruding that protrudes from the first lateral side of the first support member, wherein the first hook is configured to be inserted in a second aperture of into

a corresponding opening in the cabinet so ~~that the bracket is~~ to temporarily ~~fixed~~ fix the bracket to the cabinet.

5. (Currently Amended) The washing machine as claimed in claim 21, the arm comprising:

a hinge shaft ~~protruding to be fitted~~ extending from an end of the arm and that is coupled to the bracket; and

a wall body provided on an upper surface ~~to have of the arm, wherein the wall body~~ receives the sensor ~~fitted thereto~~.

6. (Currently Amended) The washing machine as claimed in claim 5, the arm further comprising a hook protruding from the wall body ~~to be caught on a top end~~ that engages an upper portion of the sensor ~~fitted to~~ received within the wall body.

7. (Currently Amended) The washing machine as claimed in claim 5, ~~the arm~~ further comprising a protrusion protruding from an upper surface ~~to catch a bottom end of the sensor fitted to the wall body thereon to prevent the sensor from being separated~~ of the arm, wherein the protrusions engage a lower portion of the sensor received within the wall body so as to couple the sensor to the arm.

8. (Currently Amended) The washing machine as claimed in claim 5, the sensor assembly further comprising:

a bolt coupled ~~with~~ to an end of the hinge shaft fitted to the bracket; and

a washer ~~provided~~ positioned between a head of the bolt and the end of the hinge shaft.

9. (Currently Amended) The washing machine as claimed in claim ~~21~~, the sensor comprising:

a housing having a cavity ~~inside therein, wherein the housing is configured~~ to be mounted on the arm;

a ~~transmitting unit~~ transmitter installed at ~~one~~ a first side of the housing;

a ball provided in the cavity and configured to move when the arm rotates; and

a ~~receiving unit~~ receiver installed at ~~the other~~ a second end of the housing so as to confront the ~~transmitting unit and~~ transmitter, wherein the receiver is configured to receive a signal ~~of the transmitting unit~~ from the transmitter and to output a signal to the ~~control unit~~ controller.

10. (Currently Amended) The washing machine as claimed in claim 9, the housing comprising ~~a pair of separable pieces~~:

a lower housing; and

an upper housing configured to be coupled to the lower housing.

11. (Currently Amended) The washing machine as claimed in claim 9, wherein the ball ~~lies is positioned~~ between the ~~transmitting unit~~transmitter and the ~~receiving unit so that the~~
~~receiving unit is unable to receive the~~receiver so as to block a signal of generated by the
~~transmitting unit~~transmitter from being received by the receiver when the arm ~~fails to rotate~~is in
an at rest position.

12. (Currently Amended) The washing machine as claimed in claim 9, wherein ~~a an~~
inner bottom inside is formedsurface of the cavity is concave so such that the ball ~~fails to~~
~~move~~remains stable when the arm ~~fails to rotate~~is in an at rest position.

13. (Currently Amended) The washing machine as claimed in claim 12, wherein one
of the ~~transmitting and receiving unit~~transmitter or receiver is provided ~~to at~~ an upper side of
the housing, and the other one of the ~~transmitting and receiving unit~~transmitter or receiver is
provided ~~to at~~ a lower side of the housing.

14. (Currently Amended) The washing machine as claimed in claim ~~21~~, the sensor
further comprising a ~~third~~ hook protruding from one side thereof, wherein the hook is to be
inserted in a third aperture into a corresponding opening provided in the arm so as to prevent
couple the sensor from being separated from to the arm.

15. (Currently Amended) The washing machine as claimed in claim 21, the sensor assembly further comprising an elastic member ~~absorbing~~ configured to absorb a shock transferred to the arm when the tub is in the response to a transient vibration of the tub, wherein the elastic member returning the arm having been rotated by the tub to an original is configured to return the arm from a rotated position to an at rest position.

16. (Currently Amended) The washing machine as claimed in claim 15, the elastic member comprising a spring having ~~both ends~~ a first end engaged with the arm, and a second end engaged with the bracket, respectively.

17. (Currently Amended) The washing machine as claimed in claim 21, the bracket further comprising a stopper protruding from an upper surface thereof and configured to prevent a reverse rotation of the arm.

18. (Currently Amended) The washing machine as claimed in claim 17, the bracket further comprising a reinforcement rib protruding from the upper surface ~~in to a rear of the stopper and configured to prevent reinforce the stopper from being when the stopper is pushed by the arm.~~

19. (Currently Amended) A transient vibration sensor assembly ~~offor~~ a washing machine, comprising:

a bracket attached to an inside of a cabinet of ~~thea~~ washing machine;

an arm hinge-coupled ~~withto~~ the bracket, wherein one end of the arm is disposed ~~to leave~~ a predetermined distance from ~~thea~~ tub so of the washing machine that the arm is contacted ~~withby~~ the tub ~~to rotateand rotates~~ when the tub ~~is in the~~experiences transient vibration; and

a sensor mounted on the arm, wherein the sensor senses the transient vibration of the tub ~~to output a senseand outputs a sensing~~ signal to ~~the control unita controller~~ when the arm rotates.

20. (Currently Amended) The transient vibration sensor assembly as claimed in claim 19, wherein the bracket comprises a first hole provided ~~at ain a first~~ lateral side thereof, wherein the first hole receives a coupling member ~~penetrating intothat penetrates~~ the cabinet ~~is inserted in the first hole~~, and a second hole provided ~~at one end to have the arm hinge-coupled theretoan~~ end of the bracket, wherein the arm comprises a hinge shaft ~~protruding to be fitted tothat~~ extends into the second hole and a wall body provided on an upper surface ~~to have that receives~~ the sensor fitted thereto, and wherein the sensor comprises a housing having a cavity inside, ~~to be mounted on the arm, a transmitting unita transmitter~~ installed at one side of the housing, a ~~ball provided in the cavity to move when the arm rotate, and a receiving unita receiver~~ installed at the other end of the housing to confront the ~~transmitting unittransmitter~~ and to receive a

~~signal of the transmitting unit from the transmitter and to output a signal to the control unit a~~
controller, and a ball provided in the cavity that moves when the arm rotates.

21. (New) The washing machine as claimed in claim 3, wherein the second lateral side of the first support member is opposite the first lateral side, wherein the second support member is positioned substantially perpendicular to the first support member, and wherein the second hole is provided at an end of the second support member that is opposite to the end which is coupled to the first support member.

22. (New) The washing machine as claimed in claim 9, wherein the cavity is substantially elliptical in cross section, and wherein an inner circumferential surface of the cavity is smooth so as to allow for substantially unimpeded movement of the ball within the cavity.